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Docket No.: P-156

2861  
PATENT #6  
4/27/04

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of :

Sehjoon DOKKO :

Serial No. 09/738,309 :

Group Art Unit: 2861

Confirm. No.: 2257 :

Examiner: Khawar Iqbal

Filed: December 18, 2000 :

For: CHANNEL ALLOCATION METHOD FOR RADIO DATA CALLS  
HAVING DIFFERENT BANDWIDTHS

**REQUEST FOR RECONSIDERATION**

**Mail Stop Non-Fee Amendment**

U.S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

Sir:

Applicant requests reconsideration of the rejections set forth in the January 15, 2004

Office Action. Claims 1-25 are pending in this application.

The Office Action rejects claims 1-3 and 5-9 under 35 U.S.C. §102(e) by U.S. Patent 6,097,733 to Basu et al. (hereafter Basu). The Office Action also rejects claims 10, 11, 13-15, 17-20 and 22-25 under 35 U.S.C. §103(a) over Basu and further in view of U.S. Patent Publication 20020114301 to Yee et al. (hereinafter Yee). Finally, the Office Action rejects claims 4, 12, 16 and 21 under 35 U.S.C. §103(a) over Basu and further in view of Yee and U.S. Patent 5,960,039 to Martin et al. (hereafter Martin). The rejections are respectfully traversed.

Independent claim 1 recites receiving a data call connection request, determining a traffic attribute of the data call, determining an occupied bandwidth of each of a plurality of channels of a transmission link occupied by other connected calls, and dynamically allocating the data call among the plurality of channels based on the traffic attribute and the occupied bandwidth.

The Office Action asserts that Basu teaches all the claimed features of independent claim 1. In particular, the Office Action asserts that Basu teaches (at col. 2, lines 33-47 and col. 3, lines 38-55) determining an occupied bandwidth of each of a plurality of channels of a transmission link occupied by other connected calls. However, this does not relate to determining an occupied bandwidth....occupied by other connected calls. Rather, these sections relate to a bandwidth allocator that selectively allocates channels in response to different multimedia communication requirements. See, in particular, col. 3, lines 46-55. There is no suggestion of any determination of an occupied bandwidth of each of a plurality of channels of a transmission link occupied by other connected channels.

Furthermore, the Office Action asserts that Basu teaches dynamically allocating the data call among the plurality of channels based on the traffic attribute and the occupied bandwidth. The Office Action cites Basu's col. 2, lines 33-47 and col. 3, line 38 – col. 4, line 2. However, there is no suggestion for dynamically allocating the data call based on the traffic attribute and the occupied bandwidth. Basu, at best, discloses that the communication system includes management capabilities to indicate the state of a communication system with respect to transmission rate performances. The system manager may then allocate or deallocate system

resources to adjust the available bandwidth. See col. 3, line 56-col. 4, line 2. However, this is not determining an occupied bandwidth and/or dynamically allocating the data call based on the traffic attribute and the occupied bandwidth. Rather, Basu merely may monitor the state of communications for transmission rate performances and appropriately allocate or deallocate system resources. As such, Basu does not teach or suggest all of the features of independent claim 1. Yee and Martin do not teach or suggest these missing features. Independent claim 1 therefore defines patentable subject matter.

Each of independent claims 11 and 18 define patentable subject matter for at least similar reasons. That is, independent claim 11 recites receiving a data call connection request, allocating an available time slot and an E1 link, determining a requested bandwidth based on a service option of a received data call, defining a weight value of the data call in accordance with the requested bandwidth, and dynamically allocating an  $H_0$  channel on the E1 link based on a number of connected data calls occupying each of a plurality of  $H_0$  channels and the weight value of each connected data call.

In rejecting independent claim 11, the Office Action again references Basu's col. 2, lines 33-47; col. 3, line 38-col. 4, line 2; and col. 13, lines 55-col. 14, line 30. However, this does not relate to dynamically allocating an  $H_0$  channels on an E1 link based on a number of connected data calls occupying each of a plurality of  $H_0$  channels and the weight value of each connected data call. Rather, Basu merely relates to allocating bandwidth based on respective classes of service and subsequent management of the data transmission rate performances. This is not

dynamically allocating channels based on a number of data calls occupying each of a plurality of channels and the weight value of each connected data call. Yee and Martin do not teach or suggest these missing features. As such, independent claim 11 defines patentable subject matter.

Independent claim 18 recites determining a requested bandwidth based on a service option of a data call, determining whether the requested bandwidth is greater than a reference bandwidth, analyzing previously connected data calls and a weight value of each previously connected data call to compute a bandwidth occupied by the previously connected data calls, subtracting the occupied bandwidth from a maximum allowable bandwidth for each of a plurality of channels to determine whether available bandwidth exists in each channel, and variably allocating channels from among the plurality of channels according to the availability of a minimum bandwidth.

The Office Action does not appear to even address these features of independent claim 18. That is, independent claim 18 recites determining whether the requested bandwidth is greater than a reference bandwidth. The Office Action never addresses the features of analyzing previously connected data calls and a weight value of each previously connected data call to compute a bandwidth occupied by the previously connected data calls, as well as subtracting the occupied bandwidth from the maximum allowable bandwidth for each of the plurality of channels to determine whether available bandwidth exists in each channel. These features are not addressed in the Office Action. Additionally, Basu and the other applied references do not

teach or suggest these features. Accordingly, independent claim 18 defines patentable subject matter.

Claims 2-10 depend from claim 1, claims 12-17 depend from claim 11 and claims 19-25 depend from claim 18 and therefore define patentable subject matter for at least this reason. In addition, each of the dependent claims recites features that further and independently distinguish over the applied references.

For example, dependent claim 5 recites that the mobile switching system subtracts an occupied channel bandwidth from a maximum allowable channel bandwidth to determine whether there is a minimum available bandwidth in each channel, and allocates the channel having the least occupied bandwidth if no channel has the minimum available bandwidth. In rejecting dependent claim 5, the Office Action references Basu's col. 2, lines 33-47; col. 3, lines 38-col. 4, line 2; and col. 13, line 55-col. 14, line 30. However, at best, the discussion in col. 13, line 55-col. 14, line 30 merely relates to bandwidth shortfalls. This does not suggest subtracting an occupied channel bandwidth from a maximum allowable channel bandwidth to determine whether there is a minimum available bandwidth in each channel. Rather, the relied upon section of Basu appears to deal with if the bandwidth exceeds a threshold. This is completely different than the mobile switching system subtracting an occupied channel bandwidth from a maximum channel bandwidth to determine whether there is a minimum available bandwidth in each channel.

Dependent claim 7 recites that the mobile switching system allocates a channel having the least available bandwidth if a requested bandwidth of the data call is greater than a prescribed bandwidth and the channel having an available bandwidth exists. However, Basu does not relate to any comparison regarding a prescribed bandwidth or allocating a channel having the least available bandwidth if the requested bandwidth of the data call is greater than a prescribed bandwidth and the channel having an available bandwidth exists.

Still further, dependent claim 13 recites determining whether the requested bandwidth is greater than a reference bandwidth, computing a bandwidth occupied by the connected data calls, subtracting the occupied bandwidth from a maximum allowable bandwidth for each  $H_0$  channel, to determine whether any available bandwidth exists in each  $H_0$  channel, and allocating an  $H_0$  channel having the least occupied bandwidth if no  $H_0$  channel exists.

Still further, dependent claim 19 recites allocating the channel having the least occupied bandwidth if no channel exists with minimum bandwidth, allocating the channel having the least available bandwidth if the requested bandwidth is greater than the reference bandwidth, and a channel having the minimum available bandwidth exists and allocating the channel having the least occupied bandwidth if the requested bandwidth is smaller than the reference bandwidth and the channel having the minimum available bandwidth exists.

For similar reasons as set forth, Basu and the other applied references do not teach or suggest all these features of these dependent claims. Thus, these dependent claims define patentable subject matter at least for these additional reasons.